

4-CHANNEL RECEIVER



SANSUI

QR500



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Sansui 4 channel receiver QR-500

SANSUI QR-500 4-CHANNEL RECEIVER If you've had the feeling that 4-channel stereo was out of your price league, look again. Look at this versatile new 60 watt 4-channel receiver from Sansui, and look ahead to enjoying the world's best music in the world's most exciting format. It's called the Sansui QR-500. Incorporating Sansui's unique 4-Channel Synthesizer Decoder, it lets you exploit your present 2-channel tapes, records and FM stereo broadcasts in the new 4-channel format, and to reconvert encoded 2-channel program sources back into the original four channels. Plus, you're all set to reproduce discrete 4-channel stereo sources as well. Four-channel stereo, as you probably know by now, is an immensely richer means of enjoying great music, involving

as it does, complete sound field reproduction, as opposed to the mere sound source points reproduction of 2-channel stereo. And Sansui's 4-channel system has already won for itself worldwide acclaim, incorporating a unique phase shifter circuit for unprecedented fidelity in reproducing all the liveliness and presence of original on-stage performances. No other matrix or coding system yet developed has this feature. It gives Sansui 4-channel stereo an authenticity no other maker can approach. If you're ready to make a commitment to stereo but have had the feeling that 4-channel stereo was out of your league, look again, to the Sansui QR-500 4-Channel Receiver.

Sansui

4-CHANNEL SYNTHESIZER DECODER SECTION

1 TRANSFORMS 2-CHANNEL SIGNALS TO 4-CHANNELS:

The exclusive Sansui-developed 4-Channel Synthesizer Decoder (a 4-channel synthesizing/decoding matrix and phase shifter circuits) transforms conventional 2-channel stereo records and tapes, as well as FM multiplex stereo broadcasts, to 4-channels. It also reconverts 4-channel program sources encoded into a 2-channel form back to 4-channels. In either case, the two additional channels help to closely approximate the original 'sound field' experienced at a live performance.

2 IC-EQUIPPED ALL-ELECTRONIC CIRCUITRY:

The 4-Channel Synthesizer Decoder section is completely electronic and employs Sansui-developed integrated circuits.

3 CONNECTS FOUR SPEAKER SYSTEMS:

The QR-500 with its four amplifiers connects four speaker systems to reproduce the four channels of signal.

4 REPRODUCES DISCRETE 4-CHANNEL PROGRAMS:

Equipped with 4-channel AUX input terminals, the QR-500 is able to reproduce pre-recorded 4-channel tapes and other discrete 4-channel program sources as well.

5 SYNTHESIZER INDICATOR:

Set either to convert 2-channel program sources to 4-channels or to reproduce discrete programs or "decode" encoded 2-channel program sources back to 4-channels with a switch. An indicator shows which function is engaged.



6 INDEPENDENT SLIDING VOLUME CONTROLS:

Independent sliding volume controls permit separate adjustment of the sound volume in the front and rear channels, enabling the music to be heard with optimum front/rear volume balance.

SPECIFICATIONS

AUDIO SECTION

POWER OUTPUT

MUSIC POWER (IHF): 60W at 4 Ω load
40W at 8 Ω load
CONTINUOUS POWER: 11W - 4 at 4 Ω load
8W - 4 at 8 Ω load

TOTAL HARMONIC DISTORTION:

less than 1% at rated output
INTERMODULATION DISTORTION:
(60Hz : 7,000Hz = 4:1 SMPTE method)
less than 1%

POWER BANDWIDTH: 30 to 30,000Hz at 8 Ω load

FREQUENCY RESPONSE: (at normal listening level)
30 to 30,000Hz $\pm$ 2dB

CHANNEL SEPARATION: (at 1,000Hz, rated output)
better than 50dB

HUM AND NOISE (IHF)

PHONO: better than 60dB
AUX: better than 70dB

INPUT SENSITIVITY (at rated output, 1,000Hz)

PHONO (2-Channel): 3mV (50k Ω)
4 CHANNEL INPUT: 180mV (50k Ω)
TAPE MON (pin): 180mV (50k Ω)
TAPE RECORDER (DIN): 180mV (50k Ω)

RECORDING OUTPUT (at rated output, 1,000Hz)

TAPE REC (pin): 180mV
TAPE RECORDER (DIN): 30mV

LOAD IMPEDANCE: 4 to 16 Ω

DAMPING FACTOR: 50 at 8 Ω load

EQUALIZER

PHONO: RIAA NF Type

POWER AMPLIFIERS SECTION

7 HIGH-PERFORMANCE 60 WATT POWER AMPLIFIERS:

The four power amplifiers in the QR-500 all adopt a semi-complementary circuit design to realize such excellent output characteristics as a music power output of 60 watts (into 4 Ω), continuous power output of 8 watts per channel into 8 Ω , power bandwidth of from 30 to 30,000Hz, and distortion factor of a mere 1%.

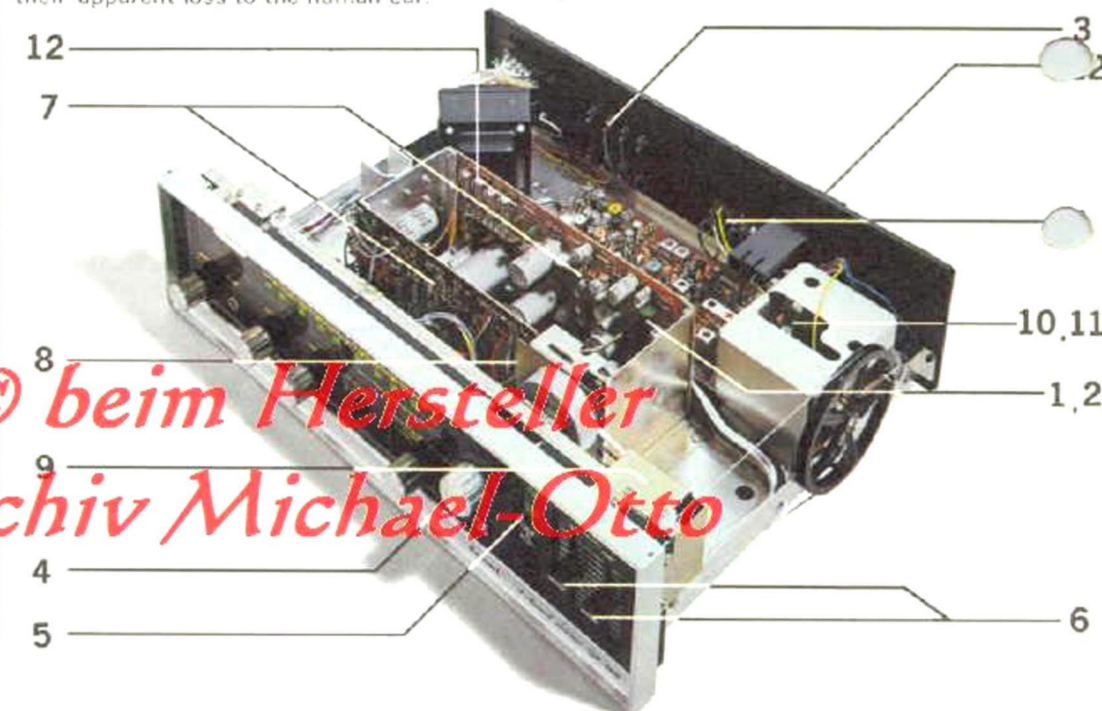
PREAMPLIFIERS SECTION

8 LOW-DISTORTION PREAMPLIFIERS:

The four preamplifiers in the QR-500 are constructed of expensive low-noise silicon transistors and together offer excellent preamplifier performance. The tone control circuits in particular are equipped with high-performance negative feedback type silicon transistors.

9 AUTOMATIC LOUDNESS CONTROL:

A built-in loudness control circuit automatically raises the volume of low- and hi-frequency notes during low volume listening to compensate for their apparent loss to the human ear.



TONE CONTROLS (front channels only)

BASS: +10dB -10dB at 50Hz
TREBLE: +10dB -10dB at 10,000Hz
LOUDNESS: (Volume Control at -30dB)
+6dB at 50Hz

TUNER SECTION

FM:

TUNING RANGE: 88 to 108 MHz
SENSITIVITY: 2.5 μ V (20dB QUIETING:)
5.0 μ V (IHF)

TOTAL HARMONIC DISTORTION: less than 1%

SIGNAL TO NOISE RATIO: better than 50dB

SELECTIVITY: better than 35dB

CAPTURE RATIO: 3dB

IMAGE REJECTION: better than 45dB

IF REJECTION: better than 60dB

SPURIOUS RESPONSE REJECTION: better than 60dB

STEREO SEPARATION: better than 30dB at 400Hz

SPURIOUS RADIATION: less than 34dB

ANTENNA INPUT IMPEDANCE: 300 Ω balanced, 75 Ω unbalanced

AM:

TUNING RANGE: 535 to 1,605kHz

SENSITIVITY: 350 μ V at 1,000kHz (bar antenna)

IMAGE FREQUENCY REJECTION: better than 50dB at 1,000Hz

better than 45dB at 1,000Hz

better than 20dB

IF REJECTION:

SELECTIVITY:

CONTROLS

SWITCHES

SELECTOR: PHONO, FM-AUTO, AM, AUX
(4 CHANNEL)

SYNTHESIZER/DECODER

TUNER SECTION

10 HIGH-PERFORMANCE FM TUNER:

The FM stereo tuner of the QR-500 combines an FM frontend incorporating a dual-gated MOS FET and a 3-gang frequency-linear variable capacitor, with a 5-stage FM IF amplifier equipped with an IC and an 4-resonator ceramic filter. Highly sensitive and selective, the tuner assures steady FM reception at all times.

11 SENSITIVE AM TUNER:

Equipped with a large, highly sensitive ferrite bar antenna, the AM tuner pulls in AM broadcasts with exceptional clarity.

GENERAL

12 OTHER FEATURES:

A stereo headphone jack for private listening. Auxiliary power socket controlled by the front-panel power switch.

Pin jack and DIN connector socket terminals for 2-channel tape monitoring.

Four quick-acting fuses to protect the important power transistors.

TAPE MONITOR (2CH.)

POWER: SOURCE, PLAYBACK
CONTROLS: ON, OFF
FRONT-VOLUME, REAR-VOLUME, BASS, TREBLE

SYNTHESIZER SECTION

INPUT LEVEL

RATED INPUT: (2-channel) 180mV (50k Ω)

FREQUENCY RESPONSE

FRONT CHANNELS: 20 to 20,000Hz $\pm$ 1dB

REAR CHANNELS: 20 to 20,000Hz $\pm$ 1dB

REAR CHANNELS PHASE SHIFT

LEFT: 90 degrees at 300Hz

RIGHT: 90 degrees at 600Hz

GENERAL

OTHER SPECIAL FEATURES:

Signal Strength Meter, Dual gate FET Frontend, FM Mono/Stereo Automatic Switching and Stereo Indicator, AM Ferrite Bar Antenna, Stereo Headphone Jack (front only), FM-IF: 4-element Ceramic Filters, AM-IF: 2-element Ceramic Filters

SEMICONDUCTORS

TRANSISTORS: 48 FET: 1 DIODES: 23 ICs: 3

POWER REQUIREMENTS

POWER VOLTAGE: 100, 117, 220, 240V 50/60Hz

POWER CONSUMPTION: 120VA (max. signal), 100W

DIMENSIONS

445mm (17 1/2") W x 132mm

(5 1/2") H x 306mm (12 1/8") D

WEIGHT

7.6kg (16.8 lbs.)